

yses: show that the utility values of all health states are crucial determinants of the cost-effectiveness results. **CONCLUSIONS:** combined therapy resulted in greatest health benefits but at the same time it was the most expensive treatment option. Behavioral therapy was the least effective and cheapest option.

PMH35

COST BURDEN ANALYSIS OF RELAPSE IN PRESCRIPTION OPIOID DRUG DEPENDENT PATIENTS TREATED WITH BUPRENORPHINE/NALOXONE AND PATIENTS WITHOUT PHARMACOLOGICAL TREATMENT

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OBJECTIVES: The buprenorphine/naloxone (BUP/NAL) combination is used in the treatment of prescription opioid drug dependent (OPD) patients. Previous analyses demonstrated that OPD patients receiving treatment vs. no treatment, were associated with a reduction in the number of admissions relating to emergency care and psychiatric services. The objective of this study was to compare resource utilisation and associated healthcare costs between the OPD patients treated with buprenorphine/naloxone combination and OPD patients without pharmacological treatment from the German healthcare perspective. **METHODS:** Two patient groups were selected: 1) OPD patients treated with buprenorphine/naloxone and 2) OPD patients with no pharmacological treatment. In the absence of accessible large longitudinal administrative claims database in Germany, the resource use was estimated based on the Truven Health MarketScan Medicaid (public healthcare claims) database from January 01, 2007 to December 31, 2013 as a representation of the German population. Resource use included pharmaceutical claims, inpatient care, outpatient care, and urine tests, estimated over twelve months after the index date. Drug costs were obtained from the German-specific source (Gelbe List PharmIndex) and other unit costs and length of stays using Diagnostic Related Group (DRG) and Einheitlicher Bewertungsmaßstab (EBM). Sensitivity analyses were performed. **RESULTS:** Costs for OPD patient receiving treatment were lower in all categories (inpatient care, outpatient care, and urine tests), except for BUP/NAL cost. Total costs over 12 months were 6,033€ and 6,244€ per OPD patient with and without pharmacological treatment, respectively. **CONCLUSIONS:** Whilst a treatment of prescription opioid drug dependent patients with buprenorphine/naloxone is associated with a medication acquisition cost, it results in public healthcare savings when compared to patients receiving no medication treatment.

PMH36

A COST EFFECTIVENESS ANALYSIS OF PHARMACOLOGICAL AND PSYCHOLOGICAL INTERVENTIONS IN ADULTS WITH OBSESSIVE COMPULSIVE DISORDER

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OBJECTIVES: Obsessive compulsive disorder (OCD) is the fourth most common mental disorder in the UK with a prevalence of 1.5%. UK guidelines recommend either pharmacological or cognitive behavioural therapy (CBT) for adults with moderate functional impairment. This study estimates the cost effectiveness of pharmacological, psychological treatments and combinations of both in the treatment of adults with OCD. **METHODS:** A decision model evaluated the cost effectiveness of selective serotonin re-uptake inhibitors (SSRIs), venlafaxine (VEN), clomipramine (CLO), behaviour therapy (BT), cognitive behavioural therapy (CBT), cognitive therapy (CT), fluvoxamine plus cognitive behavioural therapy (FLV+CBT) and clomipramine plus behaviour therapy (CLO + BT). Initial consequences of therapy (0-12 weeks) were modelled using a decision tree. Subsequent costs and outcomes were tracked in a Markov model. Treatment effects (response based on YBOCS scores) and tolerability (drop outs) were obtained from concurrent network meta-analyses. Discounted (3.5%) health service costs and benefits (QALYs) over a five year period were estimated, and probabilistic sensitivity analyses were conducted to assess robustness of findings. **RESULTS:** All psychological and combined psycho/pharmacotherapy were more costly and had better outcomes than pharmacotherapies alone. CT and BT had the highest probabilities (both ~0.35) of being most cost-effective at UK thresholds. The incremental cost per QALY of CBT and FLV+CBT versus SSRIs were £54,280 and £129,318 respectively. **CONCLUSIONS:** The selection of the most cost-effective therapy for adults with OCD is not clear-cut. The high cost-effectiveness of CT and BT is sensitive to exclusion of RCTs at high risk of bias. Our results are not inconsistent with UK guidance and suggest that CBT is slightly more efficacious than SSRIs, but is initially more expensive. If an SSRI is used, the choice of drug has important economic implications. Tailoring the format and intensity of CBT might make it more cost-effective.

PMH37

MEDICAL COST-OFFSET OF ONCE-MONTHLY PALIPERIDONE PALMITATE MONOTHERAPY AND ADJUNCTIVE THERAPY IN 15-MONTH TRIAL

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OBJECTIVES: Schizoaffective disorder (SCA) is a complex illness with interplay of psychosis and mood symptoms managed with non-optimal pharmacologic regimens that include antipsychotics, mood stabilizers, and antidepressants.1 The 15-month Randomized, Double-Blind, Placebo-Controlled, Parallel-Group Study of Paliperidone Palmitate Evaluating Time to Relapse in Subjects With Schizoaffective Disorder demonstrated the benefit in delayed relapses and reduced risk of relapse with paliperidone palmitate once-monthly injectable (PP1M).2 This analysis estimated medical costs differences among patients treated with PP1M monotherapy or PP1M adjunctive therapy to antidepressants or mood stabilizers versus placebo. **METHODS:** Rates of relapses and serious and non-serious treatment-emergent adverse events (TEAEs) were derived from the trial data. Incremental annual medical costs for clinical events from a U.S. payer perspective were obtained from literatures and inflation adjusted to 2014 costs. Mean differences in total annual medical costs for patients treated with PP1M monotherapy and adjunctive therapy

versus placebo were then estimated. One-way and Monte Carlo sensitivity analyses were additionally carried out. **RESULTS:** A lower rate of relapses (adjunctive therapy: -15.42%; monotherapy: -21.34%) and serious TEAEs (both PP1M cohorts: -3.92%) were associated with use of PP1M versus placebo. The average annual medical cost-offset per patient was -\$8320.92 for monotherapy and -\$6030.65 for adjunctive therapy driven by reduction in relapse rates and serious TEAEs. One-way sensitivity analysis showed that variations in relapse rates had the greatest impact on the estimated medical cost difference (monotherapy range: -\$11,036.64, -\$4,684.93; adjunctive therapy range: -\$9,650.33, -\$1,372.78). **CONCLUSIONS:** Use of PP1M was associated with significantly lower relapse rates and consequently a substantial reduction in medical costs. Patients treated with PP1M monotherapy resulted in even a greater medical cost saving. Further evaluation to assess the impact of monotherapy option in real-world setting is warranted.

PMH38

A COST-EFFECTIVENESS ANALYSIS OF ANTIPSYCHOTICS FOR TREATMENT OF SCHIZOPHRENIA IN UGANDA

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OBJECTIVES: Reductions in prices following the expiry of patents on second-generation antipsychotics means that they could be made available to patients with Schizophrenia in low-income countries. In this study we examine the cost-effectiveness of 5 antipsychotics—chlorpromazine, haloperidol, risperidone, olanzapine and quetiapine—for the treatment of Schizophrenia in Uganda to inform national-level policy and clinical decision making. **METHODS:** We developed a decision-analytic 3-state (outpatient, inpatient, and dead) Markov model to represent the clinical course of Schizophrenia and the experience of the average patient with the Uganda healthcare system. The model was run for a base population of 18-year-old patients attending Butabika National Referral Mental Hospital, in 3-monthly cycles over a lifetime horizon. Parameters were derived from a primary chart abstraction study, a local community pharmacy survey, published literature and expert opinion where necessary. We computed mean DALYs and costs (in \$US) for each antipsychotic, incremental cost and DALYs averted as well as Incremental Cost Effectiveness Ratios (ICER). **RESULTS:** In the base-case analysis, mean DALYs were highest with chlorpromazine (30.17), followed by haloperidol (29.48), while olanzapine (28.90) and risperidone had the lowest DALYs (28.99). Expected costs were highest with quetiapine (\$6,777), and lowest with haloperidol (\$6,404). Compared to chlorpromazine, haloperidol was a dominant strategy (i.e., it was less costly and more effective). ICERs comparing risperidone to haloperidol and olanzapine to risperidone were \$372 and \$1400 per DALY averted. **CONCLUSIONS:** Policy makers and clinicians should consider haloperidol as the first line agent for Schizophrenia in Uganda. Further, at commonly accepted thresholds (between 1 and 3 times the Gross Domestic Product of Uganda), risperidone is highly cost-effective and olanzapine is cost-effective, therefore policymakers should consider adding these agents to essential medicines lists for treatment of Schizophrenia.

PMH39

ESTIMATING THE COST-EFFECTIVENESS OF VORTIOXETINE VERSUS DESVENLAFAXINE AS FIRST LINE THERAPY FOR MILD TO MODERATE MAJOR DEPRESSIVE DISORDER IN REMITTED PATIENTS

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OBJECTIVES: The primary objective was to estimate incremental cost-effectiveness of vortioxetine, a serotonin modulator and simulator (SMS) versus desvenlafaxine, a serotonin-norepinephrine reuptake inhibitor (SNRI), as potential first line medications for treatment of mild to moderate major depression. The clinical benefit of a SMS may be in faster onset and shorter time to remission. Evidence suggests vortioxetine causes fewer adverse drug events (ADEs) than desvenlafaxine, which has implications for discontinuation of therapy. **METHODS:** A decision tree was constructed to model the cost effectiveness of these two agents from the societal perspective. Parameters were obtained from published clinical trial data, a meta-analysis using indirect treatment comparison, observational studies, preference elicitation studies, and cost estimates from Average Wholesale Prices for medications and claims analyses for cost of medical care. The model assumed that patients achieved remission. The time horizon was 48 weeks and included opportunities to switch medication therapy at 8 weeks and relapse at 24 weeks. Incremental cost-effectiveness ratios (ICERs) were calculated using the number of discontinuations averted, relapses averted, and quality adjusted life years (QALYs) gained as outcomes. One-way sensitivity analyses were conducted. **RESULTS:** The ICER was \$77,800 per QALY gained, \$59,500 per relapse averted, and \$58,500 per averted discontinuation due to ADEs. The parameter that was least robust was a utility value of maintenance therapy for vortioxetine or desvenlafaxine applied to weeks 8-48 (0.80, range: 0.78-0.82; 0.76, range: 0.74-0.78, respectively). Time to remission was varied from 6-10 weeks. A shorter time to remission for vortioxetine provided modest improvements in the ICER while a longer time to remission increased cost over the point estimate of \$77,800 per QALY gained (\$69,000-\$88,900 per QALY gained, respectively). **CONCLUSIONS:** Model results suggest that there is value in investing in vortioxetine over desvenlafaxine. A potentially faster time to remission for vortioxetine would result in increased value.

PMH40

COST-UTILITY OF VORTIOXETINE VERSUS VENLAFAXINE XR IN THE TREATMENT OF MAJOR DEPRESSIVE DISORDER IN SOUTH KOREA

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OBJECTIVES: Major depressive disorder (MDD) is an important public health problem in South Korea, with a lifetime prevalence of 6.7%. Current antidepressants do not fully meet needs in depression, so additional options are required. We assessed the cost-utility of vortioxetine (a new antidepressant with multimodal activity) versus venlafaxine XR in MDD patients in South Korea initiating these antidepressants or switching to them due to inadequate response to previous treatment. **METHODS:** A one-year cost-utility analysis from a societal perspective was performed using an initial decision-tree model, which included suicide risk, followed by a Markov model (2-month cycles) for subsequent treatments. Remission, relapse and recovery were the main health states. In first line, efficacy at two months was derived from the Asian SOLUTION study (vortioxetine vs. venlafaxine XR; NCT01571453) and for switching patients from REVIVE (vortioxetine vs. agomelatine; NCT01488071) and STAR*D (pragmatic trial of several antidepressants). STAR*D was the efficacy source for subsequent lines of treatment. Adverse event probabilities were included to consider the impact on quality of life and costs. Utilities were derived from REVIVE and adverse event disutilities from the literature. Resource use and productivity estimates were obtained from a survey of 28 Korean physicians. Korean 2013/2014 costs were applied. Deterministic and probabilistic sensitivity analyses were conducted. **RESULTS:** Vortioxetine dominated venlafaxine XR, with QALY gains of 0.0155 and a cost difference of KRW 576,433 [US\$532] (KRW 3,334 [US\$3] when productivity not considered) over one year. The model showed a greater proportion of patients in recovery after initial treatment with vortioxetine (31.4%) compared with venlafaxine XR (23.4%). These results were confirmed to be robust through sensitivity analysis; vortioxetine remained dominant in 97% of probabilistic simulations. **CONCLUSIONS:** Vortioxetine dominated venlafaxine XR in South Korea and therefore appears to be a relevant treatment option for MDD patients initiating or switching therapy.

PMH41

A COST-EFFECTIVENESS MODEL TO GUIDE HEALTH POLICY IN BIPOLAR DISORDER TREATMENT

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OBJECTIVES: To evaluate the cost-effectiveness of bipolar disorder (I and II) treatments to assist in efficient resource allocation. **METHODS:** A population based model was developed to estimate the cost per disability adjusted life year (DALY) averted for efficacious therapies to treat adults with bipolar disorder. The model is based on the 2013 Australian population with the Global Burden of Disease (GBD) prevalence estimates applied. All-cause mortality attributable to bipolar disorder is incorporated as well as the decreased rate of suicide attributable to lithium. Disability weights from GBD are used to calculate DALYs. The evaluation takes a health sector perspective and used standard costs for medications and other medical services obtained from Australian sources. All treatments with proven efficacy were sourced from current systematic reviews/meta-analyses and supplemented with expert clinical input. Treatments evaluated included monotherapy with atypical antipsychotics, anticonvulsants, and lithium as well as combination therapies evaluated in randomized controlled trials. Psychological therapies were evaluated as adjunctive to medications. Electroconvulsive therapy was evaluated as a treatment in the depressive phase only. **RESULTS:** Preliminary results suggest that among monotherapies, valproate produced the lowest cost per/DALY \$AUD 53,000/DALY (CI \$35,000 - \$84,000). Oxcarbazepine plus lithium provided the lowest cost among combinations \$104,000/DALY (CI dominant - \$446,000). Adding a disorder specific psychotherapy was less cost effective than pharmacotherapy alone for lower cost treatments (lithium, valproate) and more cost effective for aripiprazole, olanzapine, quetiapine, and combinations. Adherence costs will be varied in future analysis and presented. **CONCLUSIONS:** Preliminary results indicate treatments generally exceeded the commonly accepted \$AUD 50,000/DALY threshold for cost-effectiveness. From an economic perspective, valproate would be recommended as initial therapy. Higher cost therapies, including most combinations, should be implemented with a psychological intervention.

PMH42

HEALTHCARE UTILIZATION AND COSTS AMONG ADULTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH VILAZODONE VS. OTHER SELECTIVE SEROTONIN REUPTAKE INHIBITORS

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OBJECTIVES: Selective serotonin reuptake inhibitors (SSRIs) are widely prescribed antidepressants. This claims database study compared healthcare resource use and costs among patients with major depressive disorder (MDD) treated with vilazodone, versus other SSRIs. **METHODS:** Adults with an MDD diagnosis and ≥1 prescription fill for vilazodone, citalopram, escitalopram, fluoxetine, paroxetine or sertraline were identified from the Truven Health MarketScan® Research Databases (January 1, 2010 to December 31, 2012). Patients who concomitantly used adjunctive medication, either a second-generation antidepressant or antipsychotic, were excluded. All-cause and MDD-related healthcare resource use and costs (measured from a payer's perspective in 2012 US dollars) over a 6 month period post-index date were compared among treatment groups using multivariate robust Poisson regression and robust linear regression, respectively, adjusted for age, gender, insurance type, index year, comorbidities, prior antidepressant treatment, and pharmacy copayment at baseline (12 months pre-index date). **RESULTS:** The study cohort included 49,861 patients (mean age: 44.0 years; 70% female). Compared with the vilazodone cohort (N=3,527), patients in the citalopram (N=12,187), escitalopram (N=8,275), fluoxetine (N=10,142), paroxetine (N=3,146), and sertraline (N=12,584) cohorts had significantly more all-cause inpatient (IP) visits, length of IP stay and emergency room (ER) visits, and MDD-related IP visits and length of IP stay following the index

date, after adjusting for baseline characteristics. All-cause medical service costs (IP + outpatient + ER) were significantly higher across all other SSRI cohorts versus vilazodone by \$758 to \$1,165 (P<0.05). Similarly, all-cause total costs were also significantly or numerically higher across all SSRI cohorts versus vilazodone by \$351 to \$780 after accounting for prescription costs. **CONCLUSIONS:** MDD treatment with vilazodone was associated with significantly lower rates of inpatient and emergency services, and with significantly lower all-cause medical service and numerically lower total costs to payers compared to other SSRIs included in this study.

PMH43

HEALTH RESOURCE AND CRIMINAL JUSTICE SYSTEM COSTS FOR YOUNG CLINICAL TRIAL PATIENTS WITH SCHIZOPHRENIA AND PRIOR INCARCERATION BY TREATMENT FAILURE STATUS

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OBJECTIVES: Describe estimated health resource (HR) and criminal justice (CJ) system costs by treatment failure status for young patients with schizophrenia that participated in the Paliperidone palmitate Research In Demonstrating Effectiveness (PRIDE) clinical trial involving recently incarcerated subjects. **METHODS:** HR and CJ events were collected via a resource use questionnaire and were combined with cost estimates obtained from administrative claims and published literature to estimate costs at 15 months (trial duration). Treatment failure was defined in the clinical trial as having any of the following: an arrest/incarceration, psychiatric hospitalization, suicide, discontinuation of antipsychotic treatment due to inadequate efficacy, treatment supplementation with another antipsychotic due to inadequate efficacy, discontinuation of antipsychotic treatment due to safety or tolerability, or increase in the level of psychiatric services in order to prevent imminent psychiatric hospitalization. Costs, in 2011 US dollars, were estimated by failure status (Yes/No) for young subjects (defined as those ≤35 years of age) and summarized descriptively using a state government payer perspective. **RESULTS:** Estimated cost per person for young subjects with a failure (n=104) were \$45,590 versus \$24,586 for young subjects without a failure (n=57). Cost differences were greater for the failure group relative to no failure group for criminal justice system events (\$20,961) acute care events (\$4,722) and outpatient care (\$524). Within the failure group, extrapolating out to the 15 month trial duration, criminal justice system events were a common cause of failure in this analysis with an estimated 86.5% expected to have a criminal justice system contact and 70.2% expected to be incarcerated. **CONCLUSIONS:** From a state government perspective, provision of early interventions that reduce treatment failure among young patients may avoid substantial cost.

MENTAL HEALTH – Patient-Reported Outcomes & Patient Preference Studies

PMH44

FIVE-YEAR IMPACT OF DEPRESSION ON LIFE-SATISFACTION AND THE PROTECTIVE INFLUENCE OF SOCIAL SUPPORT

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OBJECTIVES: Life satisfaction is affected by social, economic, disease and health-related living conditions. Depressive disorders are known to be an important burden for life satisfaction, whereas social support from family or peer groups can substantially buffer this impact. The objective of this contribution is to analyse the complementary influences of depression and social support on life satisfaction. **METHODS:** In 2012, two representative population samples of the non-institutionalized adult population in Germany and UK were surveyed (n=4,008) and self-reports about satisfaction with life as a whole, health, social life, functioning, income and social life were collected. Five years earlier, in 2007, the same individuals had reported on chronic diseases, health care, health status and social and living conditions, as well as depression diagnosis and treatment. Multiple linear regression allows to estimate the prospective five-year impact of depression, multimorbidity (score of 22 chronic diseases) and social support on life satisfaction. **RESULTS:** In 2007, 13.3% of the German and 21.3% of the UK sample had suffered from depression. In 2012, 65.0% of the individuals in UK and 73.9% in Germany reported to be "satisfied" or "very satisfied" with "life as a whole". In the group of individuals with "no depression" in 2007, 75.2% of the individuals reported positive life satisfaction in 2012. Among individuals with medically diagnosed depression in 2007, the fraction was 42.3%. Multiple linear regression resulted in a strong positive buffering effect of social support (beta=-.225; p<.00) on life satisfaction and a substantial negative impact of depression (beta=-.167; p<.00) in 2012. Age had very small effect (beta=-.076; p<.00) and the influence of gender was not statistically significant. **CONCLUSIONS:** Depression has a negative impact on life satisfaction, which can partly compensated by good social support.

PMH45

CAREGIVERS' PREFERENCES FOR TREATMENT OPTIONS IN ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD): A LATENT CLASS ANALYSIS

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OBJECTIVES: To elicit caregivers' preferences for evidence-based treatment options for their child's attention deficit hyperactivity disorder (ADHD), and to identify segments of caregivers who display similar preferences. **METHODS:** Caregivers with a child aged 4-14 and in care for ADHD were recruited from outpatient clinics and advocacy groups. All caregivers completed a self-administered survey that included socio-demographic information, and a best-worst scaling (BWS) instrument assessing treatment preferences. The BWS instrument comprised 18 choice tasks, each